

## U.S. ELECTION ASSISTANCE COMMISSION 1225 New York Ave. NW - Suite 1100 Washington, DC 20005

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CONTACT: Bryan Whitener

(202) 566-3100

## REPORT TO CONGRESS SEEKS VOLUNTARY REFORMS TO ENSURE ALL AMERICANS CAN VOTE

The United States Election Assistance Commission (EAC) today released a report to Congress that recommends the development and implementation of voluntary standards, accompanying test methods and guidelines to ensure that voting systems in the United States are usable by and accessible to all Americans.\*

Computer scientists and usability experts at the Commerce Department's National Institute of Standards and Technology (NIST) researched and wrote the report for the EAC, as mandated under the Help America Vote Act of 2002 (HAVA). The report, "Improving the Usability and Accessibility of Voting Systems and Products," assesses human factors issues related to the process of a voter casting a ballot as he or she intends, then makes 10 recommendations based on that research to help make voting systems and products simpler to use, more accurate and easily available to all individuals – including those with disabilities, language issues and other impediments to participating in an election.

The report's main recommendation is for the development of performance-based voluntary standards for the usability of voting systems. This would entail creating standards that require voting systems to achieve a high degree of usability, making it easy for the average voter to vote and the average poll worker to administer the election smoothly. Performance-based standards address results rather than details. Such standards would leave voting machine vendors free to develop a variety of innovative products if their systems work well from a usability and accessibility standpoint.

Additionally, the report emphasizes developing the standards in a way that would allow independent laboratories to test systems to see if they conform to the standards. The labs would have objective ways to decide if a particular product met the standards.

The report also recommends the development of voluntary guidelines in other areas. For example, guidelines based on recent research in visual design could help election officials avoid ballot configurations that confuse voters, possibly leading them to cast a vote for the wrong candidate

The EAC report also suggests that voting machine vendors incorporate usability testing into their product development cycles to help improve their system designs.

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<sup>\*</sup> *Usability* is a measure of the effectiveness, efficiency and satisfaction achieved by a specified set of users performing specified tasks with a given product. *Accessibility* generally refers to ways that make a system easier for people with disabilities such as blindness to use.

Specifically, the 10 recommendations made by the EAC report are as follows:

- Develop voting system standards for usability that are performance-based, high-level (i.e., relatively independent of the technology), and specific (i.e., precise);
- Specify the complete set of user-related functional requirements for voting products in the voting system standards;
- Avoid low-level design specifications and very general specifications for usability (only those product design requirements that have been validated as necessary to ensure usability should be included as "shall" statements in standards);
- Build a foundation of applied research for voting systems and products to support the development of usability and accessibility standards;
- Address the removal of barriers in current requirements and draft standards;
- Develop ballot design guidelines based on the most recent research and experience of the visual design communities, specifically for use by election officials and in ballot design software;
- Develop a set of guidelines for facility and equipment layout, as well as a set of design and usability testing guidelines for vendor- and state-supplied documentation and training materials;
- Encourage vendors to incorporate a user-centered design approach into their product design and development cycles including formative (diagnostic) usability testing as part of product development;
- Develop a uniform set of procedures for testing the conformance of voting products against the applicable accessibility requirements; and
- Develop a valid, reliable, repeatable and reproducible process for usability conformance testing of voting products against standards with agreed upon usability pass/fail requirements.

HAVA specifies that all future voting system reforms, including those eventually recommended by the EAC on usability and accessibility, be in place by Jan. 1, 2006. However, today's report makes specific interim suggestions for voting officials who will be purchasing new equipment before the 2004 general election.

For example, the report advises state election officials to request that voting systems vendors provide information on usability testing conducted on their products. Once a system is purchased, states the report, elections officials should evaluate its usability with actual ballots, voters and poll workers before an election.

"Improving the Usability and Accessibility of Voting Systems and Products" will provide an initial road map for the EAC's soon-to-be-appointed Technical Guidelines Development Committee (TGDC). The TGDC's mission is to assist the EAC in the development of voluntary voting system guidelines. The first set of voluntary guidelines is due nine months from the appointment of committee's members. NIST is charged with providing technical support to the TGDC, and the NIST director will serve as its chairman.

A copy of the usability and accessibility report may be downloaded from the EAC Web site at www.eac.gov.

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The U.S. Election Assistance Commission was created by the Help America Vote Act of 2002 (HAVA). The Commission is charged with administering voluntary guidelines for election requirements under

The Commission is charged with administering voluntary guidelines for election requirements under HAVA, maintaining a clearinghouse of information regarding election administration procedures including testing and certification of election equipment, and administering the Election Assistance and Help America Vote Programs.